

## **REMARKS**

Reconsideration of this application in light of the amendments and remarks is respectfully requested.

### **I. Rejections Under 35 U.S.C. § 112**

#### **A. First Paragraph Rejections**

The recitation that the antidegradant comprises a wax in claim 14 is clearly supported at least by paragraphs [0003] – [0004], [0011], and Table 1 of the published application.<sup>1</sup> Paragraphs [0003] – [0004] explain that antidegradants include antiozonants and one antiozonant is wax. Paragraph [0011] and Table 1 clearly show that wax is a component of the disclosed examples. Accordingly, the rejection of claim 14 for lacking written description should be withdrawn.

The negative limitation in claim 16 is clearly supported at least by paragraph [0009], which contains nearly the exact wording of the negative limitation of claim 16.

#### **B. Second Paragraph Rejections**

Patent specifications are written for one of ordinary skill in the art. One of ordinary skill in the art would easily understand the meaning of the term antidegradant. This person would understand what types of ingredients are commonly considered antidegradants in the industry. Above and beyond what is required, the specification does include explanation and discussion of antidegradants. Paragraph [0003], for example, says that antidegradants are for “preventing

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<sup>1</sup> The published application is referred to for ease of citation, since it contains paragraph numbers and can be word searched by the Examiner. No changes were made to the written description before the application published.

atmospheric attack of the rubber compound.” Paragraphs [0003] and [0004] speak of both antidegradants and antiozonants. One of skill in the art knows that antidegradants include both antiozonants and antioxidants. Wax is given as an example of an antiozonant. Thus, the Examiner has not met the burden of showing that the term antidegradant is indefinite.

## **II. Rejections Under 35 U.S.C. § 102**

The Office Action fails to make a prima facie case of anticipation by Bruck (DE 3501697). The Office Action completely omits any reference to the “one or more antidegradants” claim element. The Bruck reference does not disclose this element. Even though the claim was rejected on the unfounded basis that the term “antidegradant” was indefinite, a prima facie case of anticipation requires that each element of the claims be present in the cited reference. “A claim limitation which is considered indefinite cannot be disregarded.” MPEP § 2143.03 (I). Thus, for this reason the anticipation rejection of claims 1-7 and 11-12 must be withdrawn.

In addition, it is also apparent that the Bruck reference does not teach the use of any of the rubbers recited in the Markush group of claim 1. Instead, Bruck teaches the use of combinations of different NBRs and EPDM. NBR and EPDM are not any of the specific rubbers listed in claim 1 (NBR is not a type of butadiene rubber, because it contains the acrylonitrile monomer in addition to butadiene), and they also do not fit under the category of thermoplastic rubbers listed at the end of the Markush group. For this additional reason claims 1-7 and 11-12 are not anticipated by Bruck.

In addition, the claims are also not obvious over Bruck in view of Battaile. As explained above, the Bruck reference is missing at least two elements of independent claim 1. Regarding

the antidegradant element, one of skill in the art would not be motivated to use any antidegradants with the compositions disclosed in Bruck, since Bruck discloses that its NBR/EPDM mixtures are already known to have good “ozonosphere resistance.” Regarding the polymer element, the Bruck reference teaches away from modifying the polymer element from the NBR/EPDM blend that it teaches. This is because the benefits over the prior art disclosed in Bruck are attributable to the specific blend of NBR and EPDM.

Accordingly, claims 1-7 and 11, which were only rejected over Bruck under 102(b), should thus be in condition for allowance. Claim 8, which was rejected under § 103 also, should also be in condition for allowance as explained below.

### **III. Rejections Under § 103**

Claims 8-10 and 12-20 were rejected as obvious over Bataille (U.S. 2001/0051677) in view of Bruck. The Office Action states that Bataille is silent on the thio compound, but that the Bruck reference teaches this limitation. This rejection is traversed on the basis that the combination of the Vulkanol 85 thioether of the Bruck reference with the composition of Bataille is not proper. The Office Action stated that the motivation for the combination was the “expectation [of] developing rubber composition with ozone resistance properties.” This motivation is insufficient for several reasons.

First, Bataille already has a component for ozone resistance—the antidegradants it discloses. There is no indication that this component is not sufficient for ozone resistance. Thus, there is no motivation to further boost the ozone resistance with additional expensive components.

Second, Bruck is directed to compositions for “hose covers, conveyor covers, or power transmission belts.” Such articles are not in the same field of endeavor as Bataille, which is directed to tires. Tires are significantly different from the covers and belts disclosed in Bruck. Visual appearance is not as important in covers and belts as it is in tires, and covers and belts are not subjected to same types of integrity disrupting forces as tires are. This leads away from the combination of Bruck and Bataille in general.

Third, even if one of skill in the art were lead to the Bruck disclosure, they would not be motivated to select the Vulkanol 85 component for combination with the composition of Bataille. Bruck clearly teaches that its ozone resistance properties are because of the EPDM/NBR polymer matrix component. (USPTO translation, p. 3, 2<sup>nd</sup> paragraph.) If one of skill in the art were looking to improve ozone resistance of the Bataille composition (the asserted motivation to combine), they would be motivated to change the polymer matrix of Bataille to the NBR/EPDM blend used in Bruck. They would not be motivated to select the Vulkanol 85 component, because no benefit whatsoever is attributed to the use of Vulkanol 85. Therefore, no one of skill in the art would be motivated to combine this element of Bruck with the Bataille reference for any reason.

Therefore, a prima facie case of obviousness has not been made against claims 8-10 and 12-20. Accordingly, these claims are believed to be in condition for allowance.

#### **IV. Claim 16 was not Addressed in the Office Action**

The limitations of claim 16 were not addressed at all in the Office Action. Although the Examiner rejected claim 16 under § 112, the limitations of this claim must be considered under 103 and a prima facie case of obviousness be made, otherwise it should not be listed as rejected

under 103. “[A]ll the limitations of the claims must be considered and given weight, including limitations which do not find support in the specification as originally filed (*i.e.*, new matter).” MPEP § 2143.03 (II). A *prima facie* case of unpatentability has not been made against these claims, and does not exist because Bataille contains the alkali metal salt of an alkylsulphonic or alkylsulphuric acid that is excluded by claim 16. Nothing in the prior art suggests the interchangeability of salts of alkylsulphonic or alkylsulphuric acid with the claimed thioether surfactant. Thus, claim 16 is not obvious over the prior art.

#### **V. Claim Amendment**

Claim 2 is cancelled and the limitation thereof has been added to the independent claims. This amendment is permissible because the limitation has already been the subject of search and prosecution as dependent claim 2.


Whether this limitation is present or not in the independent claims does not affect the arguments above that a *prima facie* case of unpatentability has not been made.

#### **VI. Conclusion**

In summary, the § 112 rejections are untenable, the anticipation rejections are clearly missing two elements of the independent claim, and there is no motivation to combine an element from an NBR/EPDM belt and hose composition that has no apparent beneficial quality with the tire-related Bataille reference. For the foregoing reasons, the claims are believed to be in condition for allowance and allowance is respectfully requested.

Respectfully submitted,

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